SR 509, Extension and South Access Road

Screening of Alternatives C1 and D

Position Paper

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Introduction

The SR 509/ I-5 improvement/ South Access Road project is a cooperative effort of the Washington State Department of Transportation (WSDOT), the Port of Seattle, King County, and the cities of SeaTac, Des Moines and Kent. The project proposes mobility improvements for the extension of SR 509, improvements to Interstate 5, and increased access to SeaTac International Airport.

Five project-level build Alternatives had been planned for evaluation in a Supplemental Draft EIS (SDEIS): B, C1, C2, C3 and D.

The Purpose of this paper is to describe the reasoning behind the decision to eliminate Alternatives C1 and D from further consideration. The ultimate goal is to include in the SDEIS only those alternatives that are considered both reasonable and permittable given current permit requirements.

History

In 1997 the SR 509 corridor extension project transitioned from a corridor EIS to a project level EIS with three build alternatives: B, C and D. In 1999, as the result of a Value Engineering Study recommendation, two new alternatives, C2 and C3, were developed as 'improved' versions of the previous Alternative C (later re-named C1). This created a total of five build alternatives. We continued to analyze all five of the build alternatives to the same level of detail, issuing supplemental discipline reports that included C2 and C3.

During the period between 1998 and 2001 we have entered into more detailed coordination with the project partners and local agencies regarding conflicts between the build alternatives and other key regional projects. WSDOT entered into preliminary discussions with the permitting agencies with oversight capacity for wetlands and water quality/highway runoff. Our conclusion at this time is that Alternatives C1 and D have clear conflicts with other essential regional projects and include substantial water resource impacts that the other build alternatives avoid or lessen. Given that the above conflicts and impacts render these two alternatives unreasonable compared to the other three remaining build alternatives, and considering that alternatives C1 and D are not supported by either the project partner agencies nor the permitting agencies, a formal decision was made to screen these alternatives from further consideration during the EIS process. To this extent both the project Steering Committee, on March 22nd, 2001, and Executive Committee, on March 29th, 2001, have concurred with the elimination of Alternatives C1 and D from further consideration.

Description of Alternative C1

The alignment for C1 would extend SR 509 from its southernmost terminus at 188th St. through the State owned Right of Way until S. 192nd St. where it diverts to the east (see the Alternative Screening Exhibit). As it continues past the north side of Des Moines Creek Park the alignment would cross the northern portion of the Federal Aviation Administration (FAA) Extended Object Free Area (XOFA). Due to FAA requirements, the roadway would be covered where it traverses the XOFA. SR 509 would then veer southward passing under S. 200th St. between Des Moines Creek Park and the Federal Detention Center. Continuing southeasterly towards I-5 the roadway would pass through a large mobile home residential area. Near the SR 99/ S. 208th St. area, the South Access Road would join with the proposed SR 509 extension at a partial 'Y' interchange. Then the roadway would continue on to merge with I-5 via Collector Distributor lanes. The length of Alternative C1 (SR 509 corridor portion) would be approximately 3.4 miles.

Alternative C1 Screened Out (Eliminated)

The alignment for Alternative C1 has many adverse impacts within the project area. The alignment would impact a number of projects associated with the partner agencies and important to the regional environment and economy. The primary impacts are as follows:

- **Impacts Class 1 Wetland**

  Alternative C1 impacts wetland F, which is a Class 1 wetland. Wetland F is 28.77 acres, and serves a number of vital functions within Des Moines Creek Basin. Alternative C1 would impact 3.3 acres of wetland F, as well as 3.61 acres of wetland F buffer area. The U.S. Corps of Engineers and the Department of Ecology, the regulatory agencies for the 404 Wetlands and 401 Water Quality permits, have voiced negative concerns about impacts to Wetland F. Therefore, this alternative would have difficulty being permitted.

  Of the remaining build alternatives, both C2 and C3 completely avoid Class 1 wetlands, while alternative B has a lesser Class 1 impact on wetland F than C1.

- **Impacts the Des Moines Creek Basin Regional Detention Facility**

  The Des Moines Creek Basin Plan (DCBP) consists of five projects within this highly developed basin, intended to make significant water quality and stream improvements. The DCBP is needed by King County and the other agencies located within the basin to address drainage, flooding, erosion and sedimentation, fish habitat degradation and water quality problems

due to both existing and proposed development within the basin. In terms of the DCBP, wetland F is essential because the plan calls for its modification and use as a regional detention pond and water quality treatment facility. The alignment for Alternative C1 would impact a large area (3.3 acres) of wetland F within the limits of the regional detention facility. This would reduce its intended capacity with little or no opportunity for expansion, and is not supported by any of the DCBP partnership agencies (King County, SeaTac, Des Moines, Port of Seattle and WSDOT). Without the full capacity as designed, the goals of the DCBP cannot be met.

Of the remaining build alternatives, alternatives C2 and C3 completely avoid conflict with the DCBP wetlands, while alternative B impacts a lesser portion of the wetland.

- **Requires Tunnel Under Extended Object Free Area**

  North of Des Moines Creek Park the alignment for Alternative C1 crosses the Extended Object Free Area (XOFA) at the end of one of the runways for Sea-Tac International Airport. The Federal Aviation Administration (FAA) requires any roadway within the XOFA to be covered, which in this case would require a tunnel. The alternative requires the roadway crossing of the XOFA to extend more than 1000 feet, which creates issues regarding motorist and public safety. Fire and safety standards require any tunnel longer than 800 feet to have ventilation and fire control systems. The ventilation systems that are currently used by WSDOT in locations such as the I-90 Mount Baker Tunnel have exhaust vents located along the top of the tunnels. This poses concerns because the FAA prohibits surface features (such as vents) within runway protection zones, in particular within the XOFA. Constructing a tunnel of this length underneath the runway would create serious safety concerns and increased short and long-term costs.

  None of the remaining build alternatives would require a tunnel (B, C2, C3).

- **Impacts The South Aviation Support Area Project**

  The alignment cuts through a large portion of the area outlined for the Port of Seattle's South Aviation Support Area (SASA) project. The SASA project is a future capital improvement project by the Port of Seattle that would construct a runway accessible service area for passenger and cargo airplanes. As currently defined, the alignment would reduce the available area for SASA, which the Port has indicated as undesirable since it would render the project area insufficient to accommodate the intended aircraft and facilities. Given the need for this area to be runway

accessible, there are no other identified areas within the vicinity that meet the requirements for area and runway access.

None of the remaining build alternatives would impact the SASA project area (B, C2, C3).

Description of Alternative D

The alignment for Alternative D would extend SR 509 from its southernmost terminus at 188th St. within the existing State owned Right of Way (see the Alternative Screening Exhibit). SR 509 would generally be oriented in a north/ south direction from S. 196th St. to roughly S. 220th St. The roadway would clip the southwestern corner of the western Runway Protection Zone, parallel to but not encroaching into Des Moines Creek Park, crossing over Des Moines Creek once on two parallel bridges. The South Access Road would extend southeasterly from S. 200th St. across Port of Seattle land, joining with SR 509 in a partial Y interchange near S. 208th St. south of S. 220th St., with SR 509 turning southeasterly through property owned by the City of Des Moines. Alternative D would join the I-5 corridor at SR 516. The length of Alternative D (SR 509 corridor portion) would be approximately 4.6 miles.

Alternative D Screened Out (Eliminated)

The alignment for Alternative D has many adverse impacts within the project area. The primary impacts are as follows:

- **Impacts Class 1 Wetland**

  Alternative D impacts Wetland F, which is a Class 1 wetland. Wetland F is 28.77 acres, and serves a number of vital functions within Des Moines Creek Basin. Alternative D would impact 2.8 acres of wetland F, as well as 2.21 acres of wetland F buffer area. The U.S. Corps of Engineers and the Department of Ecology, the regulatory agencies for the 404 Wetlands and 401 Water Quality permits, have voiced negative concerns about impacts to wetland F. Therefore, this alternative would have difficulty being permitted.

  Of the remaining build alternatives, both C2 and C3 completely avoid this Class 1 wetland, while alternative B has a lesser impact on wetland F than D.

- **Impacts the Des Moines Creek Basin Plan Regional Detention Facility**

  The Des Moines Creek Basin Plan (DCBP) consists of five projects within this highly developed basin, intended to make significant water quality and

stream improvements. The DCBP is needed by King County and the other agencies located within the basin to address drainage, flooding, erosion and sedimentation, fish habitat degradation and water quality problems due to both existing and proposed development within the basin. Within the DCBP, wetland F is essential because the plan calls for its modification and use as a regional detention pond and water quality treatment facility. The Alignment for Alternative D would impact a large area (2.8 acres) of wetland F within the limits of the regional detention facility. This would reduce its intended capacity with little or no opportunity for expansion, and is not supported by any of the DCBP partnership agencies (King County, SeaTac, Des Moines, Port of Seattle and WSDOT). Without the full capacity as designed, the goals of the DCBP cannot be met.

Of the remaining build alternatives, alternatives C2 and C3 completely avoid conflict with the DCBP wetlands, while alternative B impacts a lesser portion of the wetland.

- **Greatest Amount Of Impermeable Surfacing**

  Alternative D would require the most new impervious surface of any of the alternatives within the Des Moines Creek Basin. Alternative D is one mile longer than Alternative B, which is the next longest alternative. Alternative D would have a total of 114.9 acres of new impermeable surfacing. Alternatives B, C2, and C3 would have 89.5; 74.1; and 78.5 acres of new impermeable surfacing, respectively. Alternative D would contribute additional roadway runoff flow to two creeks within the project limits, Des Moines Creek and Massey Creek. Both creeks discharge into Puget Sound. Minimizing impermeable surface area has been emphasized by the Department of Ecology in terms of maintaining water quality standards, and by the National Marine Fisheries Service (NMFS) as being important in aiding in salmon recovery. Given the more stringent standards included within the new Department of Ecology stormwater manual to be released later this year, the effort to minimize the amount of new impervious surfacing becomes even more important.

  The remaining build alternatives B, C2 and C3 all have substantially less new impervious surfacing than D.

Conclusion

Given the assessment of environmental impacts associated with each build alternative, and continued discussion of those impacts with the permitting agencies, it has been determined that two of the Alternatives, C1 and D, are not reasonable or permittable and have been screened from further consideration. The Alternatives that will remain under consideration for the SDEIS are A, B, C2 and C3.

Appendix A: Alternative Screening Matrix
SR 509 Corridor Completion/I-5/South Access Project

ELEMENTS of Build Alternatives			Alt. B	Alt. C1	Alt. C2	Alt. C3	Alt. D
SECTION 4(f)	Acquisition		0.5	0	8.0	6.5	0
	Parks Approval		No	Yes	Yes	Yes	Yes
WETLANDS	Class I		1.5	3.3	0	0	2.8
	Class II		4.4	5.8	7.6	7.5	5.9
	Class III		1.8	0.6	0.9	1.2	3.6
	Total Wetland Impacts		7.7	9.7	8.5	8.7	12.3
WATER QUALITY	Impervious Surface	New	89.5	74.5	74.0	78.5	115.0
NOISE	Receptors*		366	401	329	177	423
RELOCATIONS	Mobile Homes		0	99-109	125-130	0	22
	Single Family		87-94	58-62	74-78	90-92	53-57
	Multi-Family Buildings which contain ↓		31-33	36	37	6	27
	Multi-Family Units		150-155	191	200-204	32	270
	Businesses		16-18	15	12-14	7-8	25
ECONOMIC & LAND USE	Economic Dev. Campus		No impact	No impact	No impact	Precludes completion	No impact
COST 1998 dollars (millions)**			451	440	425	446	491

Note: Acres are to the nearest 1/10th
*Receptor numbers are preliminary estimates only
**Cost Estimate numbers are from 1998, and do not reflect the recent additional I-5 scope

APPENDIX B
Alternative Screening Exhibit